REMARKS

In view of the following discussion, the Applicants submit that none of the claims now pending in the application is anticipated or made obvious under the provisions of 35 U.S.C. § 102 and § 103. Thus, the Applicants believe that all of these claims are now in allowable form.

I. REJECTION OF CLAIM 12 UNDER 35 U.S.C. § 102

The Examiner has rejected claim 12 in the Office Action under 35 U.S.C. § 102(e) as being anticipated by Westerberg et al. (US Patent No. 6,236,656). The Applicants respectfully traverse the rejection.

Westerberg teaches a method for scheduling packet transmissions. Specifically, it teaches a method that determines the total number of radio links and then determines the bandwidth per link for each user. (See Westerberg, Column 4, lines 34-48; Column 7, lines 20-27) However, Westerberg's approach does not actually calculate a channel efficiency for a mobile station.

The Examiner's attention is directed to the fact that Westerberg fails to disclose a novel method for scheduling delivery of packets where a channel efficiency is calculated for a mobile station, as recited in Applicants' independent claims. Specifically Applicants' independent claims 7, 12, and 23 positively recite:

> 7. A method of scheduling packets for delivery to one of mobile stations and a corresponding base station in a wireless packet network comprising the iterative steps of:
>
> calculating channel efficiency for a mobile station (i); and
>
> scheduling packets for delivery to said mobile station (i) or said base station by determining a value of relative weight of said mobile station (i) by a weighting equation, responsive to the calculated channel efficiency, wherein said weighting equation is given by:
>
> $W_i = efficiency_i^{exponent}$,
>
> wherein exponent denotes a real number, wherein $efficiency_i$ denotes said channel efficiency, and W_i denotes said value of relative weight of said mobile station (i). (Emphasis added)
>
> 12. A method of scheduling packets for delivery to one of mobile stations and a corresponding base station in a wireless packet network comprising the iterative steps of:

calculating channel efficiency for a mobile station; and
scheduling packets for delivery to said mobile station or said base station by determining a value of relative weight of said mobile station by a weighting equation, responsive to the calculated channel efficiency, wherein users with higher channel efficiency receive a lower weight than users with a lower channel efficiency. (Emphasis added)

23. A base station apparatus for use in a wireless packet network comprising:
a processor for calculating channel efficiency for a mobile station (i); and scheduling packets for delivery to said mobile station (i) by periodically determining a value of relative weight of said mobile station (i) by a weighting equation, responsive to the calculated channel efficiency, wherein said weight is determined by the equation:
$W_i = efficiency_i^{exponent}$,
wherein exponent denotes a real number, wherein $efficiency_i$ denotes said channel efficiency, and W_i denotes said value of relative weight of said mobile station (i). (Emphasis added)

Applicants' invention addresses the criticality where mobile stations that consume about the same resources may end up sending different amounts of data. The reason for this situation is that different wireless users may have different channel qualities, such that packet error rates vary significantly from user to user. To address this criticality, Applicants' invention calculates the channel efficiency for each mobile station and then schedules the delivery of packets based on the calculated channel efficiency. (e.g., See Applicants' specification, Page 13, lines 4-26)

In contrast, Westerberg is complete devoid of this teaching. Specifically, Westerberg only states that:

"the SS 12 reads the following link efficiency-related information from the cell-data basis (CDB) 106 (for the cell being considered): (1) for each user in the cell, T, or the throughput per link for the user (i.e., the throughput a user would have if using the full capacity of one radio link in the cell); (2) the total number of radio links in the cell; and (3) the length of the BSS queue (Q) in the cell." (Emphasis added)

Thus, clearly Westerberg does not calculate a channel efficiency for each mobile station as taught by the Applicants. In fact, at best, Westerberg is performing a reading operation. Furthermore, Westerberg clearly states that the efficiency-related information relates to the throughput a user would have if using the full capacity of one

radio link in the cell. In other words, this is the exact problem that Applicants' invention is intended to solve. Namely, conventional methods like Westerberg, simply assume a capacity for a link without actually calculating the channel efficiency for the mobile unit. As such, Applicants' independent claims are not anticipated by Westerberg. Thus, the Applicants submit that claim 12 is not anticipated by Westerberg.

II. REJECTION OF CLAIMS 7-10, 16, 17, 23 AND 26 UNDER 35 U.S.C. § 103

The Examiner has rejected claims 7-10, 16, 17, 23, and 26 under 35 U.S.C. § 103 as being unpatentable over Westerberg et al. (US Patent No. 6,236,656).

First, the Examiner's attention is again directed to the fact that Westerberg fails to disclose a novel method for scheduling delivery of packets where a channel efficiency is calculated for a mobile station, as recited in Applicants' independent claims. As such independent claims 7, 12, and 23 are not made obvious by the teaching of Westerberg.

Thus, dependent claims 8-10, 16-17, and 26 depend from independent claims 1 and 23, respectively and recite additional limitations. For the same reasons discussed above, these dependent claims are also not made obvious by Westerberg and are allowable.

Second, throughout the Office Action, the Examiner acknowledged that Westerberg fails to teach various limitations as recited by the Applicants. However, the Examiner stated that these various limitations do not define a patentable distinct invention. Applicants respectfully disagree.

In rejecting claims under 35 U.S.C. §103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert.

denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. Denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp. 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Applicants respectfully submit that the Examiner failed to present a prima facie case of obviousness. Simply stating that Applicants' limitations in various claims do not define a patentable distinct invention is not a prima facie case of obviousness.

Thus, for the same reasons discussed above, claims 7-10, 16-17, 23 and 26 are not made obvious by Westerberg and are allowable.

III. CLAIM OBJECTIONS

Claims 7 and 23 have been amended to define "exponent," "efficiency," and "W_i" more clearly. Applicants submit that these claims are now in allowable form.

CONCLUSION

Thus, the Applicants submit that all of these claims now fully satisfy the requirements of 35 U.S.C. §102 and §103. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly requested.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

8/19/05

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